



March 2006 Shutdown Week 4

“You can’t win, ~~you can’t break even,~~
and you can’t quit the game.”

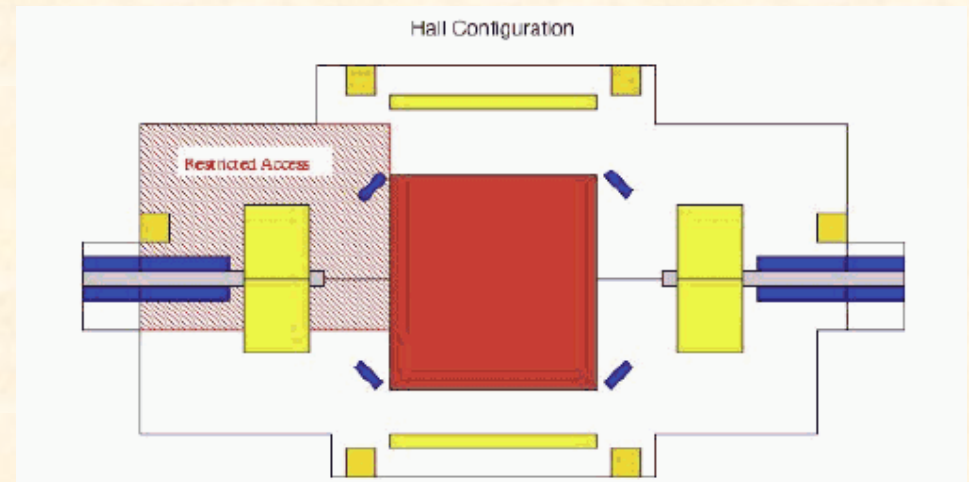


CDF Operations Summary

Steve Hahn
March 23, 2006

☛ Detector Status:

- All detectors (including CLC) on N_2 till March; if you need to work on HV ask me about LOTO
- No Hardware event builder until April; however, online DAQ group has done admirable job getting readout with entire detector using software event builder (cosmics and L2_TORTURE now possible); EVB load balancing soon
- All steel open and accessible, except around NW muon steel (a.k.a. toroid)





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☛ Saturday (3/18, 0700-1500) power outage:

- Overall went fairly well, but discovered some new “features”
- Plug for rented diesel generator to power cryo plant found with one phase missing
- 24 V power for relay to SVX heaters not on UPS/diesel power—took some time to debug
- SVX chilled water pump on same circuit with backup SVX water pump; overloaded circuit till understood
- Many online computers in 3rd floor computer room on UPS/diesel power meant Rick and I had to remove window and put in fan—will take care of this procedurally in future
- New test of diesel generator transfer switch at end meant we had to run on just UPS power for ~15 minutes; worked fine!
- Despite innumerable warnings, people came in wondering why they couldn't connect to their computers and CD Oracle group surprised
- Yesterday (3/22) electricians working on chiller accidentally turned off building power (not experimental power) for <5 seconds; some glitches (*e.g.*, SVX pumps), but minimal impact

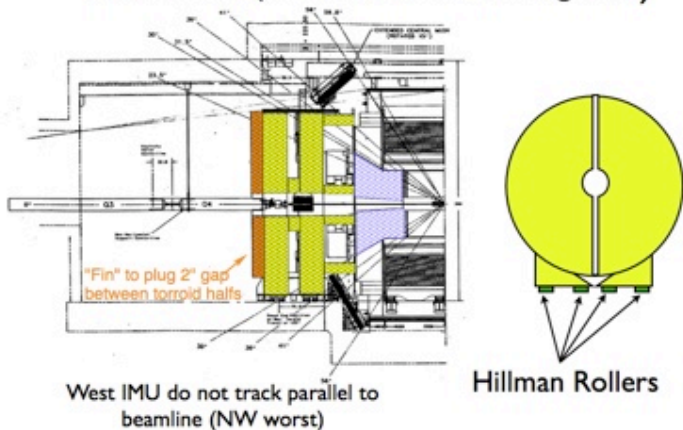


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- Yesterday (3/22), NW toroid lifted and Hillman roller replaced:
- Found old Hillman roller damaged, see Rick's webpage link "IMU 400 T Hillman Roller Photographs" on <http://ncdf67.fnal.gov/~tesarek/shutdown06/>

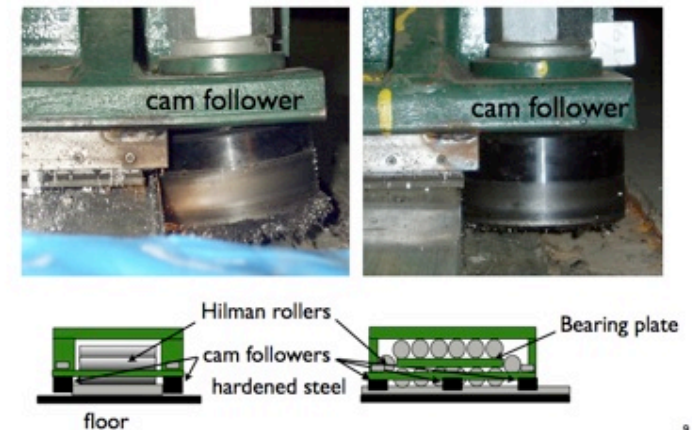
Next Week (Hillman Roller Investigation)



8

Figure showing the location of the IMU and the Hillman rollers which allow for the motion of the IMU steel.

IMU Hilman Roller Work



9

Figure showing the Hillman rollers and cam followers for the IMU steel.



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The Hillman rollers were removed on 3/22. The photographs below show the Hillman rollers, bottom side up. The steel plate in the figures is the load bearing plate.



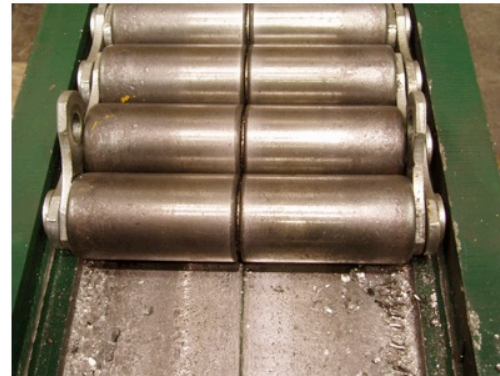
Damaged Hillman roller and bearing surface. The Hillman roller is upside down in the figure. The load bearing plate at the bottom. Note the flaking metal at the edges of the bearing plate and the discoloration of the rollers near the edges.



Bearing plate detail. Note the milling marks from manufacture of the bearing surface near the center. The edges show the flaking metal off of the bearing surface (only one side shown).



Damaged Hillman rollers. Note the discoloration of the edge of the bearings. Pitting is observed over the whole roller surface, but the edges are particularly damaged.



Hillman rollers and bearing surface.

► Still under investigation; new Hillman roller in place



Important Dates

Steve Hahn
March 23, 2006

Date	
2/27	Shutdown begins
2/27	Open Collision Hall, begin detector work
2/27 - 6/1	No Owl shifts (Cryo: 3/6 - 5/22): HV off at night!
3/1 - 4/6	No Hardware Event Builder
3/7	Open all steel, full detector access
3/15 - 3/29	Hilman roller replacement (NW IMU steel)
3/15	Chambers off flammable gas
3/18	8 hour power outage to B0 and trailers
4/5 - 4/26	Solenoid bore access(?)
4/3	1/2 hour site wide power outage
4/24	1/2 hour site wide power outage
5/1	Flammable gas to COT (test recirculation system)
5/12	Restrict access to collision hall
5/12 - 5/25	Cosmic rays, Calibration and debugging
5/25	Tevatron Cold